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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,690	04/02/2004	Mitsutoshi Fujita	69804-015	9744
7590	11/29/2005		EXAMINER	
McDermott, Will & Emery 600 13th Street, N.W. Washington, DC 20005-3096			EVERHART, CARIDAD	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/815,690

Applicant(s)

FUJITA ET AL.

Examiner

Caridad M. Everhart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

Applicant's arguments filed 9-20-2005 have been fully considered but they are not persuasive. Applicant has argued that Kong does not teach the steps required by claim 1. The arguments made with respect to claim 1 have been persuasive because of it is agreed that Kong does not teach the virtual insertion of the load-dividing buffer. However, the arguments have been respectfully found not persuasive with respect to claims 9 and 10 because claims 9 and 10 do not require the determining of the virtual insertion of the load-dividing buffer. The argument that Kong does not teach any of the limitations of the claims is not persuasive because the rejection cites the portions of Kong with disclose the steps . While it is true that Kong teaches the steps for determining a layout, the disclosure made by Kong satisfies the limitations of claims 9 and 10 as in the following rejection.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kong (US 6,886,152B1).

Kong discloses applying a branching penalty(col. 5,lines 11-14). In order to assign a branching penalty, there would be required to have information regarding the types of cells and their arrangement and wiring, as the loads and delays would be required in the calculation of the delays(col. 3,lines 48-55). An algorithm calculates if a better result is obtained with a different arrangement(col. 4,lines 38-43 ). This would correspond to the limitation of virtually inserting a load at a point. The point at which a

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buffer should be inserted is determined(col. 5,lines 16-20) is determined using the results. The wiring information is changed according to this result(col. 8, lines 10-16). Timing characteristics are included in the calculation(col. 2,lines 1-10). The delay is calculated (col. 3,lines 50-55). Determining where the buffer is inserted according to the results of these calculations(col. 6, ines 40-45).

Kong is silent with respect to the limitation of information on the types of cells and other structures.

It would have been obvious to one of ordinary skill in the art at the time of the invention that Kong encompasses the limitation of determining the information on the types of cells and other structures because this information would have been required to carry out the calculations which the algorithm taught by Kong carries out. It would have been obvious to one of ordinary skill in the art at the time of the invention to have carried out the calculations of the dependent claims such as determining the routes with the tightest time constraints because these are optimization steps which would be desirable in the optimization of the layout which one of ordinary skill in the art would be able to determine.

***Allowable Subject Matter***

Claims 1-8 are allowed.

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

CME.  
11-28-2005

*C. Everhart*  
EVERHART  
EXAMINER